

## RenShape® SL Photopolymers

# Stereolithography Materials for High-quality Models and Prototypes

### RenShape® SL photopolymers

are technologically advanced stereolithography materials formulated to produce durable, robust models and prototypes with outstanding accuracy, intricate reproduction of detail and a high-quality surface finish. The photopolymers are ideal for building snap-fit parts, polypropylene and ABS-like prototypes and selectively colored medical models on the full range of SLA®\* platforms. The versatile RenShape® SL materials product family includes photopolymers with a variety of physical characteristics including heat deflection temperatures up to 185°F (85°C), elongations as high as 30%, flexural strengths from 7,000 to 15,000 psi and good humidity resistance. RenShape® SL materials are also known for their easy processing, high throughput and good green strength. Parts made with the photopolymers are easy to clean and require minimal finishing.



- ✓ **Easy to process with good green strength**
- ✓ **Thermoplastic-like performance with good toughness and durability**
- ✓ **Excellent accuracy and reproduction of detail**
- ✓ **Requires minimal finishing**
- ✓ **Ideal for snap-fit designs, precision models and high-quality prototypes**

Parts made with new RenShape® SL 7820 photopolymer.

\*SLA is a registered trademark of 3D Systems.

# Typical Physical Properties of RenShape® SL Photopolymers for HeCd, General Purpose and Medical Applications

	Color	Viscosity @ 86°F (30°C), cP	Hardness, Shore D	Flexural Modulus, psi	Flexural Strength, psi	Tensile Strength, psi	Elongation, %	Notched Izod Impact, ft.-lb./in.	Heat Deflection Temperature, °F (°C) @ 66 psi
<b>HeCd Systems</b>									
RenShape® SL 5170	Clear Amber	165- 195	85	423,000- 436,000	15,500- 15,700	8,600- 8,800	7-19	0.5-0.7	120 (49)
RenShape® SL 5220	Clear Amber	275	86	428,000	3,700	9,000	8.3	0.7	115 (46)
RenShape® SL 5240	Clear Amber	375	84	209,000- 219,000	7,800- 8,200	5,200- 5,500	22-26	0.8-1.0	136 (58)
RenShape® SL 5260	White	250	85	350,000	11,000	8,300	12	0.7	136 (58)
<b>General Purpose - Solid State</b>									
RenShape® SL 5195	Clear Amber	180	83	236,000	7,150	6,740	11	1.0	117 (47)
RenShape® SL 5510	Clear Amber	180	86	443,000	14,400	11,100	5.4	0.5	144 (62)
RenShape® SL 7510	Clear Amber	325	87	356,000	11,900	6,500	13.7	0.6	124 (51)
RenShape® SL 7520	Clear Amber	450	86	410,000- 421,000	14,100- 15,000	9,000- 9,400	5.2-7.2	0.29-0.34	129 (54)
RenShape® SL 7565	Clear Lt. Amber	165	84	274,000- 300,000	8,600- 9,500	6,600- 7,800	19-30	0.5-0.7	118-126 (48-52)
RenShape® SL 7570	Clear	147	89	360,000- 405,000	13,800- 14,200	8,600- 8,700	6-7	0.45-0.49	122-140 (50-60)
<b>Medical Grade - Solid State</b>									
RenShape® SL H-C 9100**	Clear/ Selectively Colorable	1,030	75	-	-	7,250	8	-	-
RenShape® SL Y-C 9300*	Clear Selectively Colorable	1,090	75	-	-	6,525	7	-	-
RenShape® SL Y-C 9500	Clear	1,090	75	-	-	6,525	7	-	-
RenShape® SL Y-C 9500 FT1	Flesh- tone Pink	1,050	75	-	-	5,200	10	-	-

After 90-minute UV post cure. UV post cure + thermal post cure values available for all resins.

\* For HeCd systems

\* Selectively colorable

For additional information on each product including proper storage and handling, please refer to the respective Huntsman Materials Safety Data Sheets and Technical Data Sheets.

# Typical Physical Properties of RenShape® SL Photopolymers for High-performance Applications

	Color	Viscosity @ 86°F (30°C), cP	Hardness, Shore D	Flexural Modulus, psi	Flexural Strength, psi	Tensile Strength, psi	Elongation, %	Notched Izod Impact, ft.-lb./in.	Heat Deflection Temperature, °F (°C) @ 66 psi
<b>Next Generation - Solid State</b>									
RenShape® SL 7800	Light Amber	205	87	330,000-380,000	9,900-10,600	6,000-6,800	10-18	0.73-1.1	144 (62)
RenShape® SL 7810	White	210	86	275,000-348,000	8,500-10,000	5,200-7,400	10-20	0.83-0.91	124 (51)
RenShape® SL 7820	Dark Brown/Black	210	86	290,000-348,000	9,000-11,100	5,700-7,400	7-13	0.88-0.93	124 (51)
RenShape® SL 7840	Pearl White	270	87	232,000-319,000	9,400-11,100	5,200-6,500	12-20	0.7-1.1	118 (48)
RenShape® SL 7870	Clear	180	86	286,000-333,000	9,400-10,300	5,470-6,050	10-22	0.85-1.15	118 (48)
<b>Durable - Solid State</b>									
RenShape® SL 7540	Clear Amber	279	79	199,000-209,000	7,000-7,500	5,500-5,700	21.2-22.4	0.72-0.86	135 (57)
RenShape® SL 7545	Clear Amber	350	79	200,000-225,000	7,300-8,000	5,000-5,700	12-21	0.5-0.7	118-122 (48-50)
<b>ABS Like - Solid State</b>									
RenShape® SL 7560	White	200	86	350,000-375,000	12,000-15,000	6,000-9,000	6-15	0.5-0.8	133-140 (56-60)
RenShape® SL 7580	White	500	84	340,000	12,000	7,700	11	0.6	145 (63)
RenShape® SL 7585	Clear to White	665	86	227,000-340,000	7,300-9,400	5,500-6,100	10-12	0.6	142 (61)
<b>High Heat - Solid State</b>									
RenShape® SL 5530	Clear Amber	210	88	380,000-470,000	9,100-12,600	8,300-8,900	3.8-4.4	0.4	158-185 (70-85)

After 90-minute UV post cure. UV post cure + thermal post cure values available for all resins. For additional information on each product including proper storage and handling, please refer to the respective Huntsman Materials Safety Data Sheets and Technical Data Sheets.

### Huntsman Advanced Materials

We are a leading global supplier of synthetic and formulated polymer systems for customers requiring high-performance materials which outperform the properties, functionality and durability of traditional materials. Over 2,300 associates at 13 locations worldwide work to fulfill this promise day by day.

### Markets

Huntsman Advanced Materials supplies advanced high-performance materials for design, prototyping and manufacturing. With recognized expertise in research, development and processes we offer a unique and wide range of innovative solutions, combined with strong technical support and customer service.

More than 9,000 companies around the world use Huntsman Advanced Materials technologies in key markets such as adhesives and inks, aerospace, automotive, coatings, construction, electron-ics, medical, marine, power transmission and distribution, sports equipment and wind power generation.

### Global presence – 13 manufacturing sites



### For more information

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